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The AMERICAN DENTAL JOURNAL

BERNARD J. CIGRAND, M. S., D. D. S.

Editor Publisher Proprietor.

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DR. BERNARD J. CIGRAND
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JULY and AUGUST

Editorial and Comment

1916

ADDITIONAL DENTAL EVIDENCE AGAINST EVOLUTION

In the December issue of the "American Dental Journal" I wrote an editorial showing that dental evidence, in my estimation, yielded denial of the claims of the evolutionists, since the jaw and teeth do not show that in earlier times they were like those of the monkey, ape or baboon, and the fact that of late authors and lecturers of dental literature and schools were inclined to accept evolution as the rational belief or theory of creation, and deriding the Christian idea, has lead me to admonish my readers against casting aside the Christian belief.

A few weeks ago it became known that a research society having made plaster of Paris reproductions of an early human skull and jaw, sent these plaster casts to three eminent sculptors, requesting that they mold or model them into flesh or living form. These artists, posted as they are on the muscular coverings of the facial bones, began their task. They were not informed as to the age of the cranial or facial bones, nor were

they told of the antiquity of the original osseous outlines of the pattern. This was all done in the hope of finding out just how terrible and monkey like our ancestors appeared. Upon this depended considerable the product of the theory of evolution, since if these modern adept and trained sculptors and anatomists produced a face resembling the ape, baboon, orang-outang or monkey, why then there was from the flesh restoration approximate proof that man (and woman, too,) must have sprung from the "orango" or his kin. But what was the result of the reclothing of these ancient bones; what form came from the hands of the artists? What expression, wild, calm, ignorant or experienced, did these studios produce? Much to the surprise of all, the product of these world famed sculptors produced a face not unlike that of a laboring man of this day. Stern, firm with motive and mental qualities well blended, neither being in supremacy and both well expressed. The teeth as well as the entire jaw, maxilla and lower third of the face modern and acceptable as normal. Whether the living subject was able to obtain the three point contact, or whether his jaws formed all the angles, circles, curves and oscillations demanded by the "last minute articulator," I cannot say, but to me the product is good and wish more of my modern, civilized and progressive patients of 1916 presented half as satisfactory a dental organization.

The readers of the American Dental Journal may take considerable comfort in the thought that to gather this information and place it before them in this pictorial manner has meant considerable expense, but this journal hopes to give you even more material along this line, since my readers have manifested so deep an interest in the deductions of my editorial of December, 1915. (See pictorial insert.)

I believe most emphatically in that form of evolution which will permit me to think that man has improved and that he has bettered himself in many particulars, and that his teeth have in some degrees changed according to his foods, giving us four temperamental forms or distinct characters, but I have never accepted the idea that there is any truth in the statement that man has sprung from the orango, except that he sprang from him, simply to get out of his savage way—that's all the springing I can imagine.

The theories of evolution as annunciated by Darwin, Huxley and those before them or since, I have read and studied, but they fail to convince me. They speak and write of the missing link, they might with better propriety say the entire

chain is lost and admit that they are on the wrong trail and following the River of Doubt.

COMMENTS

The following letters tell a story which indicates how sincerely the editorials of this journal are appreciated and if space permitted scores of similar endorsements, at fully as great length and equally enthusiastic could be published. The readers are always at liberty to either support my views or denounce them, and if sent in literary shape shall be pleased to give their views publicity.

The American Dental Journal belongs to its readers; it is not owned or controlled by a dental supply house, operated for a college or fraternity, nor published by any particular dental society, but it does hope to give all these institutions a square deal and is published in the
It is your journal; write for it and support it.

"Dear Doctor Cigrand:

Kindly find my check enclosed to cover the amount due you for journal. I always look forward each month with pleasure at the thought of receiving the American Dental Journal.

Very truly,

M. B. LOOMIS, D. D. S.,
Cedar Rapids, Iowa."

1508 1st Ave.

"Dear Doctor Cigrand:

Have received a copy of the American Dental Journal and your editorial on 'Profesional Injustice to Aged Practitioners' appeals to me very strongly and while I am yet a young man, only eight years in practice, I do feel for the aged man and think something should be done along the line of interstate reciprocity as you have suggested, and your argument in favor of same is splendid, to which might be added much more. A man may be in need of a change of climate in middle life under close confinement and not able to stop work financially and yet unfitted to do anything else and I think he should have an opportunity to continue his life work at his new home. And then, a man may fail to succeed in one location and on going to an entirely new field, succeed eminently. I have known this in

every profession or business. I hope you will continue this campaign and get results.

Very fraternally,
H. K. TEMPLETON,
Covington, Tenn."

"Dr. B. J. Cigrand,
Batavia, Ill.

West Liberty, Ohio, March 9, 1916.

Dear Doctor:

I want to say that I honestly think that your 'Editorial' on 'Professional Injustice to Aged Practitioners' in the American Dental Journal is one of the most sensible editorials I have ever had the pleasure of reading. I have actually never heard a more matter of fact and more to the point talk in my life. I do think that when a man in any profession and especially in dentistry has put in the best part of his life at his chosen profession and is competent, it does seem to me as if it is doing the people of this country quite an injustice not to allow that person to practice wherever he sees fit to do so and where he can be of the most benefit to his fellow men as well as himself.

I will take for example, myself. I know I am just as competent to practice my profession in California as in Florida or any other State in the Union as I am in Ohio, and perhaps more so than the majority of those already in practice in those states, as I have been in practice for over twelve years and have given dentistry a deep study and have had a good business during those years, but I cannot go to these states as I am not up to date **on theory**, which does not amount to a rap, as far as practical work is concerned, so here I am with my wife in the first stage of lung trouble and begging me to take her to a warmer climate, but I can do nothing else and make a living than to practice my profession and I am not in a condition financially to set down and do nothing, so I suppose I can just stay in Ohio and labor on until I lower the best friend I have into the cold earth, just because the law says I must stay, as TWO—AMER. DENT. JOUR.—4614

they do not want me in California or Florida to interfere with a few HOGS who want everything their own way. Now then, perhaps if I could practice in some of these states, there would be a chance for me to keep the one I love, but the LAW says NO, so who is the murderer, not the LAW, surely?

Yours respectfully,
J. R. OSBORN."

THE HOPE OF THE NATION

"To the Editor:

Your editorial, 'Professional Injustice to Aged Practitioners,' inspires me to present some new ideas.

This is nation-wide 'Baby Week.' Many slogans have been adopted: 'Save the Babies,' 'Better Babies, Better Homes, Better Cities,' 'Good Fare, Good Care and Good Air for Babies,' 'The Babies Are the Hope of the Nation,' etc.

If babies are the hope of the nation, then the future of the nation depends on the environment of the babies at birth; their opportunities to develop into sturdy young manhood and womanhood and upon their social and industrial advantages to become efficient supporters of the home, the state and the nation.

Conditions confronting the babies today are these: Thirty-seven per cent of wives and mothers are working in industry and eight to ten years in industry depletes the normal function for motherhood. Babies of men who earn \$10 a week die at the rate of 255 per 1000, while those of men who earn \$25 a week die at the rate of 84 per 1000.

The reports of 1910 show that 6,500,000 wage laborers in industry received an average of \$527 per year, \$44 per month, or \$11 per week. The industrial relations commission of 1915 ported that 79 per cent of wage earning fathers received less than \$700 per year. This means that from one-half to two-thirds of their families lived below the standard of decent subsistence, while about one-third were living in abject poverty.

The young men of to-day are confronted by the facts that less than 10 per cent of business succeeds and that over 80 per cent of men at the age of 65 are dependent.

If present conditions are the result of operations in industry, that have made it possible for 2 per cent of us to come to own over 60 per cent and 65 per cent of us to own less than 5 per cent of the nation's wealth, while 33 per cent own no property, then why beat about the bush? The reason why 65 per cent of the people own less than 5 per cent of our wealth is because they have received only a wage that is simply a fraction of the wealth by them produced; while the 33 per cent own no property because they have not been privileged to receive the small fraction.

What is being done to prevent the conditions? Absolutely nothing, excepting as we as individuals or as individual organizations, attempt to selfishly stabilize our economic status midst the present social and industrial confusion.

To so amend conditions that every adult male may be able to provide for a wife and for their children from infancy to maturity and at the same time provide a competency for old age, is to so amend our corporation laws, as to federally provide that the mutual principle co-operation shall be carried through both the production and distribution ends of our corporations. We must come to know that such laws must privilege every adult male citizen to acquire sufficient amount of the created wealth to maintain his social and economic stability as a good citizen and parent; that he may be a dependable factor to the stability and integrity of the home, the state and the nation; otherwise the nation's hopefuls become dependent.

The future welfare of the nation will be secure when present conditions are so reversed that 90 per cent of daughters, wives and mothers are not obliged to work in industry; that over 90 per cent of business succeeds; that over 90 per cent of men at the age of 65 are independent, that over 85 per cent of school children graduate from our high schools. These conditions can be made possible, only when over 90 per cent of adult males own and have use of over 60 per cent of the created wealth of the nation. Such possession and use can be made possible only when every adult male worker is privileged to share in the co-operatively produced wealth of corporate industry. Then, and only then, can a majority of American families become stable supporters of government and business and not dependent wards of the state.

Battle Creek, Mich.

March 10, 1916

DR. E. H. COLLIER,

Dentist.

DENTAL INLAYS IN ANCIENT AMERICA

BY DR. JOSE J. ROJO.

[This remarkable article will sure interest every reader. The illustrations are in brown inserts.—EDITOR.]

Innumerable were the cities founded in Mexico, and varying the degrees of civilization reached by them up to the last days of their prosperity. However, archæological discoveries and the few trustworthy data we possess enable us to state that they all practiced the arts and sciences in some form or other.

A great many of the data given in this paper have been taken from the work of the eminent Professor Flores, entitled "History of Medicine in Mexico."

Diseases of the mouth of man, no matter how hardy his constitution, exist and have always existed among all races,

perhaps from their very beginning, as is proved to us by reading history, and these diseases vary in magnitude according to the factors involved.

The Aztec race, owing to its iron-like constitution, suffered from very few affections of the mouth, but notwithstanding this fact its physicians performed numerous dental operations.

As to dental instruction among the Aztecs, the law of induction leads us to suppose that for the sake of convenience, or owing to their lack of great legislators, or to the knowledge they possessed of the natural laws of heredity, professions were in those remote ages transmitted from father to son.

Ixtlilxochitl, a direct descendant of Netzahualcoyotl, in his historical writings says: "The wise men were charged with the painting of all the sciences they knew and the teaching by heart of all the songs that had any reference to their wars and histories."

This leads us to infer that those who were ambitious of knowledge in those days, and had no means of acquiring it at home, could find the information at certain centers.

Nowadays we are becoming day by day more forcibly convinced of the fact that subdivision of labor is the most powerful lever of all progress, but the probabilities are that in those days the physicians undertook the practice of medicine, surgery inclusive of dental surgery, and perhaps also pharmacy. Only obstetrics constituted a separate profession, which was intrusted to women and transmitted from mother to daughter.

Corresponding to the gods Apis, Apollo, and Æsculapius, the deities of medicine of the old world, the Mayas also had their god of medicine, Sitbolutim and his companion the goddess Yxchel, and the Aztecs their goddess Tzapotlatenan, which proves beyond all doubt that they cultivated medicine.

The Aztecs were familiar with dental pathology and therapeutics, for they knew the properties of a multitude of herbs and prepared them in different ways for the treatment of their ailments. Senor Flores cites the names of a vast number of medicinal plants* in his works. It is certain beyond all doubt that they treated stomatitis, bad breath, toothache, caries, and other affections.

With regard to surgery, there is a fact the importance of which can never be adequately expressed to the dentist who is at all interested in the history of his profession; that fact is the following:

* Mecaxotitl, quimchpatli, chicomecatl, ytzcuinpatli, fianquizpepetla, flanchinchinoaxohuitl, yamancapatli, flepatli, flancacaoatl, and many others.

Professor Batres has in the course of his archæological expressions encountered very many specimens of human teeth which reveal the degree of culture in dental surgery attained by some of the Aztec tribes. These specimens form a collection of upper human incisors which Professor Batres classifies according to the place of their discovery, as follows: Zapotecas, teeth with inlays of iron pyrites; Mayas, inlays of jade; Taracos, with a groove in the center of the cutting edge; Totonacos, with two grooves in the cutting edge. Professor Batres states that he also found an example of interstitial metallic filling between the molars of one of these crania.

The first specimen is an upper left incisor with an incision in the form of a right angle at the approximal and distal angles of the tooth, thus forming a surface which is the exact reverse of that of nature, there being two right-angled incisions extending throughout the entire thickness of the tooth instead of a round and more or less acute edge. These incisions are not only symmetrical but also present a perfectly polished surface.

Fig. 1. Front view of incisor of Zapoteca Indian, showing inlay of iron pyrite and mutilated angles. (A) Inlay. (B, B) Mutilated angles.

Figs. 2 and. Upper central and lateral incisors of Maya Indian, showing inlays of jade. (A) Inlay. (B, B) Mutilated angles.

Fig. 4. Vertical section of Fig. 1, showing inlay on a level with the labial surface of the tooth. (A) Inlay.

Fig. 5. Vertical section of tooth shown in Fig. 2. (A) Inlay. (B) Portion of inlay projecting beyond the margin of the cavity.—Plate I.

In the center of the labial face of the tooth there is an inlay of iron pyrite three millimeters in diameter, symmetrically placed, perfectly circular, and marvelously well fitted; the edges of the inlay are in perfect adaptation to those of cavity and no adhesive substance can be detected.

It is wonderful that after such an immense lapse of time the tooth and inlay still hold together, owing to either the perfect adjustment or to the presence of some intervening substance.

Figs. 6, 7, 8. Front view of central and lateral incisors of a Trasco Indian, showing a groove in the cutting edge. (A) Contour of the groove. (B) Greatest depth of groove.

Figs. 9 and 10. Lateral view of teeth shown in Figs. 6 and 7. (A, A) Dotted line indicating the contour of the bottom of the groove.

Fig. 11. Vertical section of tooth shown in Fig. 8. (A, A) Contour of groove.—Plate II.

Figs. 12 and 13. Labial surfaces of central and lateral incisors of Totomaco Indian, with double grooves in the cutting edge. (A) Contour of grooves. (B) Greatest depth.

Fig. 14. Vertical section of tooth shown in Fig. 12. (A, A) Line showing contour of grooves.

Fig. 15. Lateral view of tooth shown in Fig. 13. (A, A) Line showing contour of grooves.—Plate III.

The inlay is of a dark brown color, resembling that of iron oxid (perhaps this color is the result of age); the body of the tooth is of a normal color, from which we are led to suppose that the substance of the inlay is of such a nature as to render it proof against the action of the saliva. The state of the root shows us that the pulp of the tooth preserved itself in a sound condition, notwithstanding the operation.

The second specimen is a central upper incisor, the two angles of which have been cut; this example like the previous one has an incision of about a millimeter and a half on each of its angles, the surface is perfectly smooth, and the vertex of the angle points toward the neck of the tooth.

The difference observed on comparing this specimen with the previous one is that the substance used for the inlay is jade, which the ancients used so much for making beads, amulets, and other ornaments.

Some of the inlays are flush with the surface of the enamel, while others protrude about a millimeter above its level; in all the specimens the inlay has a perfectly polished surface.

The third and fourth specimens are central and lateral upper incisors with perfectly symmetrical incisions or grooves; the third specimen has one groove in the center of the cutting edge, and the fourth has two. The bed of these grooves is semilunar in form, and their surface is perfectly smooth. Their approximate dimensions are—a millimeter and a half in width; a millimeter and a half in depth; one and a half or two and a half millimeters in length. The place they occupy is the cutting edge of the tooth; they begin at the lingual face of the enamel, deepen as they approach the labial face of the enamel, and are continued on the labial face of the tooth to a length of from one to two millimeters.

A coating of a vivid red color, like cinnabar, is observed on the surface of the majority of these teeth.

I shall make one of the inlaid specimens the subject of a few essential observations. It is a canine tooth from the same

source as those already described. It also had an inlay, which has fallen out; it has no incision on its cutting edge. The cavity, which is circular and perfectly cut, occupies over half the crown of the tooth; its exterior diameter is exactly five millimeters, that of its interior is slightly greater, and it has a general depth of about a millimeter and a half.

The cusp is worn away by natural use, this wear extending to the lower border of the cavity made for the inlay. The root of this tooth is porous, its vertex truncated, and its surface rough. A comparison of this tooth with the sound and compact root of another tooth from the same cranium indicates that its root was affected by some morbid process, perhaps caused by the falling out of the inlay and the death of the pulp.

The natural wearing away of the cusp and the loss of the inlay clearly demonstrate that the operation was performed during the man's life, between the ages of twenty-five and thirty, and the state of the root also warrants the supposition that the death, decay, etc., of the pulp set in some time after the inlay fell out.

The fact that these remains were found in earthen vessels, that the crania and other bones contained in the latter are painted red, and the places in which they were found, seem to demonstrate that it was an infrequent operation, perhaps only performed on rulers or priests, or that it was a religious emblem. It may also be taken for granted that it was an operation only performed in the last years of the zenith of progress and prosperity of these races, as the specimens encountered are not numerous.

We can assert after a close study of these specimens that some of the aboriginal races of this continent practiced operations of a most delicate nature upon the teeth, attaining a very high degree of perfection in their execution, which shows that they were acquainted with the anatomical structure of the teeth, and possessed instruments and the other necessary means for making these inlays, which are a wonderful surprise to those who see them.

Consequently, we can affirm that the Aztecs knew and practiced pathology, therapeutics, and something like dental surgery.

DENTISTRY AFTER THE CONQUEST

Shortly after the conquest the corporation of the city of Mexico, on January 13, 1523, agreed upon the following resolution: "This day the said gentlemen acting on the petition of Francisco de Soto, barber and surgeon, ordered that as long

as it were the pleasure of the said council the salary of fifty dollars in gold a year be assigned to him, and paid to him in three instalments, in consideration whereof the said Soto shall reside in this city and here practice his trades." According to Dr. Flores this was the first decree regarding medical studies in Mexico ever issued by the authorities.

Following the example of the Roman College of Physicians (a licensing and examining board), the city council on January 11, 1527, decreed the formation of a Mexican College of Physicians, of an official character, its object being the supervision of examinations and of the practice of the medical sciences; it also kept a close lookout for quacks, punishing all those who attempted to practice a profession without possessing the necessary qualifications.

Between the years 1551 and 1553 of the viceroyalty the Spanish government issued a decree ordering the foundation of a university in Mexico. During the early years of its existence this institution devoted all its efforts and resources to the teaching of theology, and it was not until the year 1580 that the first professorship of medicine was founded. However, a long period elapsed before medicine was properly taught; a perusal of historical data tells us that it was only in 1816, or six years after the declaration of independence, that there were four professorships of medicine, and it is only after that date that medicine can be said to have had a special course devoted to it.

ALKALOIDAL MEDICATION IN RELATION TO ANESTHESIA AND ANALGESIA

By I. C. HERB, M. D.

The administration of alkaloids before general anesthesia is of special interest to the anesthetist, more so than to the surgeon, because for the time being the life of the patient is in his keeping. "Shotgun" methods of alkaloidal medication, however, are as reprehensible as is the total omission of this form of medication in cases where it is favorably indicated.

The advantages said to accompany the administration of alkaloids before general anesthesia are as follows: (1) Less of the anesthetic is required. Glandular activity is diminished, thereby reducing the danger of pneumonia. There is less vomiting before and during anesthesia, therefore a smoother narcosis and also less post-operative vomiting. (2) The patient's apprehension of impending danger is lessened or alto-

gether abolished, and he submits to preliminary preparation and anesthesia in a quiet, sleepy manner. (3) The stage of excitement is less pronounced, and muscular relaxation is more quickly developed. (4) The patient remains asleep after completion of the operation, hence suffers less pain.

The disadvantages of preliminary medication to general anesthesia may be summarized as follows: (1) Danger of respiratory paralysis. (2) Destruction of pupillary reaction. (3) Varying effects of the drug. (4) Predisposition to pneumonia in mouth, jaw, and throat operations; after-effects, as vomiting, headache, and blocking-up of secretions; prolonged respiratory depression which may favor pulmonary edema.

After carefully weighing the relative merits and demerits enumerated, the writer concludes that the administration of morphine, scopolamin, and atropin before general anesthesia has certain advantages, but these advantages are not sufficient to counterbalance the risks attendant on their employment. A smaller amount of ether or chloroform will cause respiratory failure if the center is already depressed by hypnotic drugs. The loss of the pupillary reflex is a serious handicap, as nothing else indicates so unerringly the degree of narcosis. The belief that the danger from ether, chloroform, or nitrous oxid is diminished is contrary to the evidence at hand. These drugs, therefore, should not be employed when untrained, inexperienced anesthetists are in charge, as the anesthetic is rendered more complicated, and extra skill and judgement are required.

THE INTER-RELATION BETWEEN SALIVARY AND GASTRIC DIGESTION

[Editor Hoff of the *Dental Register* gives in this valuable digest.—EDITOR.]

Physiologists have long known that the starch-digesting enzyme present in the saliva of man is destroyed as soon as it is exposed to even small concentrations of "free" hydrochloric acid, or, in terms of modern chemical interpretation, hydrogen ions present in the stomach. From the standpoint of a useful performance on the part of the starch-digesting saliva, the ready inhibition of its effectiveness as a digestive agent was somewhat mystifying when it was first discovered; for the duration of amylolytic activity appeared to be restricted essentially to the very brief period during which the foods are retained in the mouth, masticated and swallowed. Subsequently

it was ascertained that the actual sequence of events within the stomach does not compel an immediate mixing of the entering contents with the gastric juice which is being secreted. The mass that is swallowed in successive portions accumulates at first in the fundus of the stomach; and since in the absence of vigorous muscular movements in that region the contents are penetrated with great difficulty by the gastric secretion which is continually being poured out by the walls of the stomach, salivary digestion can actually proceed for a considerable time without serious interruption. In view of the rapidity with which the salivary enzyme can convert starch into soluble sugar, the preliminary digestion of carbohydrates can therefore usually be completed before destruction of the effective agent in the saliva takes place. Dr. Maxwell, of the physiologic laboratory at the University of Melbourne, has suggested a further function of the salivary enzyme which he believes to be of importance for the later digestive processes. It has long been known that many substances in suspension or in colloidal solution have the power of absorbing enzymes, thereby inhibiting their activity. Maxwell has found experimentally that although unboiled starch administered in the form of intact grains does not hinder the action of pepsin, peptic digestion may be delayed in the presence of colloidal starch solutions through absorption of the preteolytic enzyme. The time interval for the peptic digestion may, for example, be increased four-fold in the presence of a 2 per cent starch solution. There is a stage in the progressive digestive disruption of the starch molecule at which the capacity of absorption of pepsin is lost. This is coincident with the appearance of dextrans, even before sugars are formed. In accord with the foregoing it is actually found that cooked farinaceous foods—rice, potato, bread, porridge, etc.—all hinder peptic digestion if they are not first subjected to the salivary digestion. The inhibition of peptic activity by carbohydrates like gum acacia is not prevented by a previous contact with saliva for the reason that they are not digested by it. The positive feature to which Maxwell has drawn attention has been summarized by the statement that the saliva of man, by virtue of its enzyme ptyalin or amylase, plays a considerable part in aiding gastric digestion by hydrolyzing colloidal starch which would otherwise absorb pepsin.

A SLIGHTLY DIFFERENT WAY

BY PROGRESSIVE MEN.

Rugae on Plates

After flask as opened, wax removed, take suitable carving instruments and different sizes of ball burnishers, and carve rugae on plaster in the half containing teeth. Burnish tin-foil over this, pack and vulcanize. It takes only a few minutes, and you are well repaid for your trouble.—Dr. H. L. Entriiken.

To Tighten Old Plates

If you want to delight the next patient for whom you repair an upper plate, just previous to investing, flow a rounded "bead" or ridge of wax just inside the border clear around the periphery of the plate. Did you ever notice blisters on the plate where a bubble was, in repair jobs? Well, that is what happens in this case. The wax burns out and the rubber expands there.—Dr. J. F. Adams.

Preventing Steel Hypodermic Needles from Rusting

Rusting and consequent clogging of steel hypodermic needles is prevented by equal parts of almond oil and alcohol. This mixture may be kept in a covered glass dish or a wide-mouthed bottle, and the needles allowed to remain in the solution when not in use. They may easily be removed with tissue forceps, the oil allowed to drain, and what remains in the caliber of the needles can be cleared out with a jet of alcohol. Solutions containing bacterins and vaccines seem especially prone to produce clogging of needles, and this annoyance can be prevented absolutely, and the life of the needle indefinitely prolonged by the use of the almond oil-alcohol mixture.—Dr. B. Wolff.

To Repair a Hole in a Bicuspid or Molar Crown

Take a clean piece of asbestos paper and cut out a disc that will fit inside the band. Place occlusal surface on something flat and press the disc down firmly and evenly. Moisten several pieces of asbestos and fill up the crown. Place on a charcoal block and turn on the flame of the blowpipe. Cut a piece of solder large enough to cover the hole and place it in position. Flux well and the heat. When the solder starts to

curl on the edge, turn it down with a pointed slate pencil, and keep applying the heat until the solder is caught all around. With a little practice, you can drag solder around almost any place with an ordinary slate pencil. If the crown is on a bridge, wrap the bridge with asbestos paper, wiring it on, and proceed as above.—Dr. V. C. Smedley.

A Short, Accurate Method of Adapting a Porcelain Crown

Prepare root as desired, grind crown to approximately fit root, adjust post, mix synthetic porcelain as for filling, cover base of crown with the prepared porcelain, insert post in crown, dry root of tooth, place piece of tin foil over end of root to exclude secretions, place crown in position, holding in place until porcelain is partially set, remove crown and post intact, lay aside for about fifteen minutes until porcelain is thoroughly crystalized, then polish and set with cement.—Dr. A. W. Wilkes.

Dissolvable Impression Plaster

A mixture of two parts of potato flour and ten parts of Paris to make a dissolvable impression plaster. The potato flour must be very dry. The mix is made with cold water to which a pinch of table salt is added. After having been assembled, the impression is coated with a solution of one part of potassium or sodium silicate (waterglass) in three parts of water, and the cast is poured. After the cast has set, the impression is dissolved away in boiling water.—Dr. F. Duijvensz.

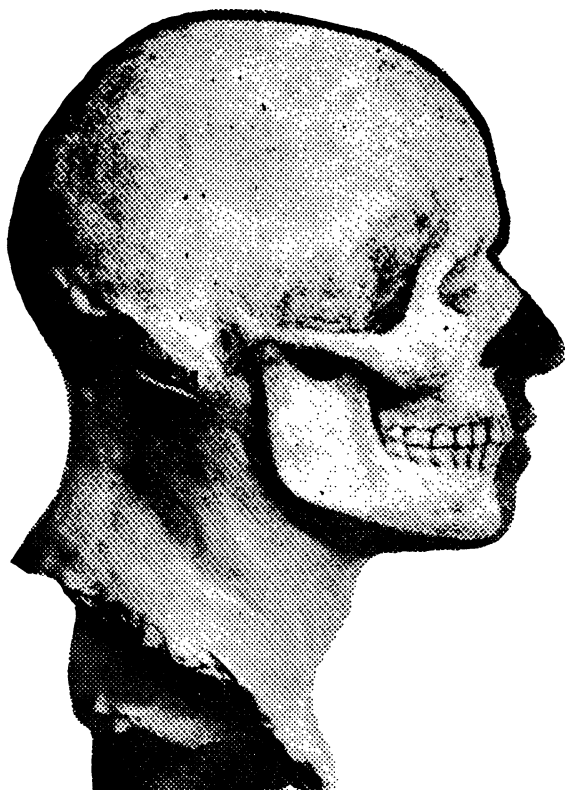
Amalgam Not Poisoning Dentists

Ptyalism and stomatitis are apparently not encountered among members of the dental profession. In the light of Schulte's report, the need of insistence on the use of protective gloves by dentists during the preparation of amalgams can not be sustained. The reason that absorption does not follow readily through the skin of the dentist's hand is perhaps to be found in the fact that mercury as such, rather than greasy ointments, is presented to the cutaneous surfaces and fails to adhere firmly, owing to the different surface tension in the two cases. From a prophylactic point of view, the measure to be instituted to avert the possible though apparently remote danger of undue intake of mercury by dental workers consists in liberal ventilation, whereby the volatile mercury and mercurial

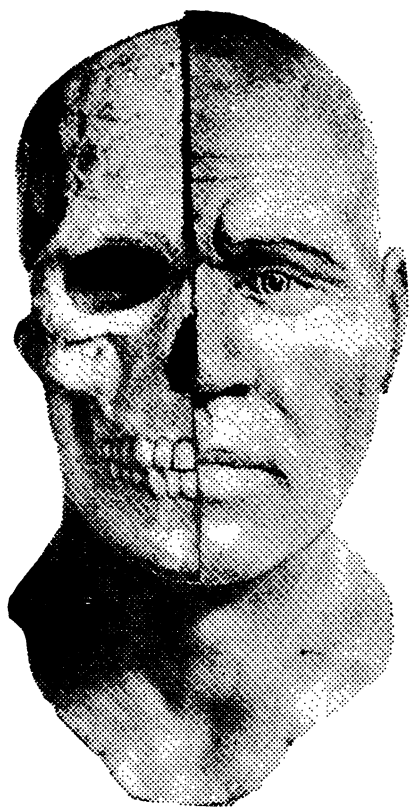
dust are suitable dissipated. This is equivalent to saying that in a well-ventilated room, such as any working place or human habitation should represent, the dangers to the dentist are minimal. With this, actual experience in practice seems to correspond.—Dr. N. S. Hoff.

Crown and Bridge Work and Partial Plates

The importance of constructing artificial dentures upon a logical basis and with a correct conception of the principles underlying the selection of artificial teeth, is more apparent now than at any time in the immediate past. We are just beginning to appreciate the truisms that the covering of tooth crown with a gold shell to act as a bridge abutment or the devitalization of a tooth, marks tragic epoch in man's life. Just in proportion as some forms of crown and bridge work were lauded in years past, and still are at the present time in some quarters, as the ideal method of dental substitution, just in that proportion must they be condemned today as a prolific source of systemic and local disturbances of degrees of severity impossible to appreciate, unless we are willing to avail ourselves of the diagnostic possibilities of bacteriology and radiology. Crown and bridge work is being made to relinquish the high place it has most unwarrantedly occupied in the field of prosthesis in favor of the full or partial denture the least dangerous to the general health of the patient and the most satisfactory form of dental prosthesis if constructed upon the scientific principles which have been given to the profession by men whose names should be household words wherever dentistry is practiced.—Julio Endelman.



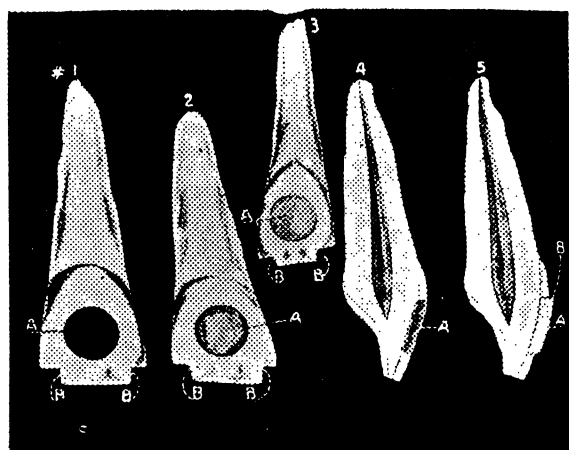
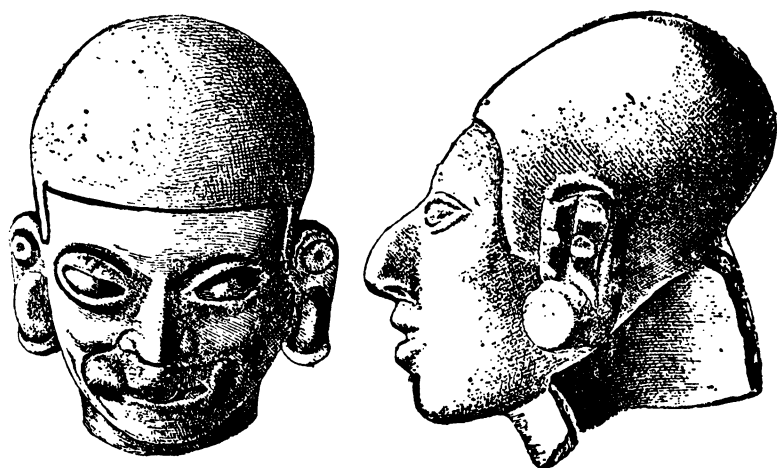
Side View of Pre-historic Skull (15,000 Years Old)



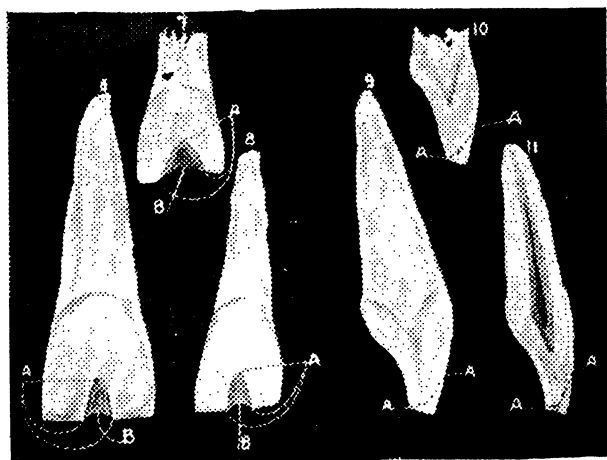
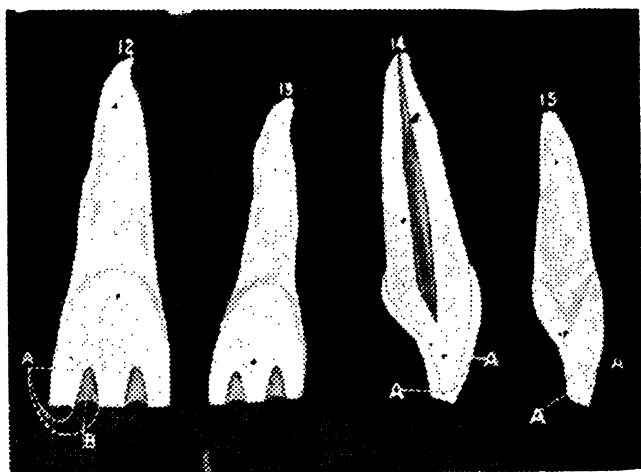
Front View of Pre-Historic Skull



Carved Heads—With Inlay Work



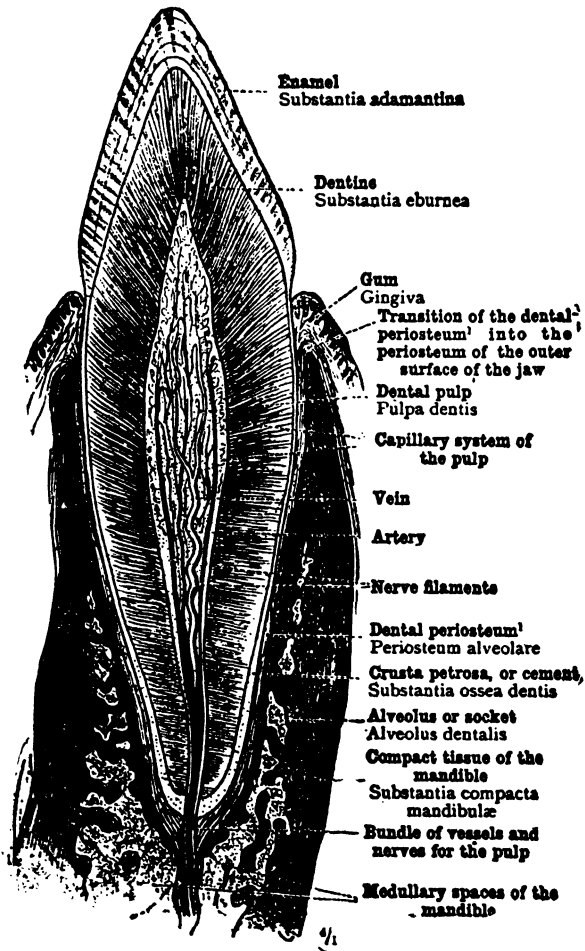
Acient Mexican Dental Inlays



Pse-Columbian Dental Inlays



Inlays in Teeth of Ancient Incas



Parts and Sub-Parts of Tooth (Toldt's Anatomy)

ANXIOUS MOMENTS



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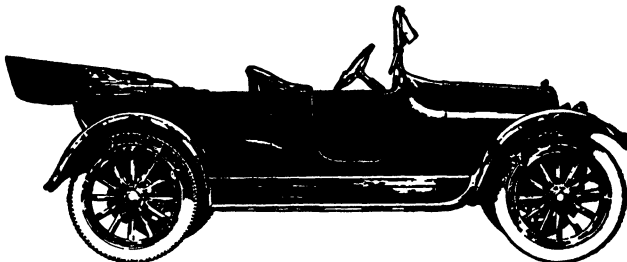
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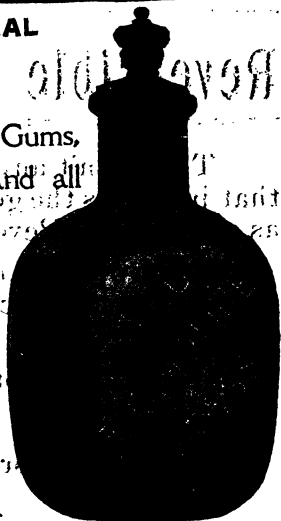
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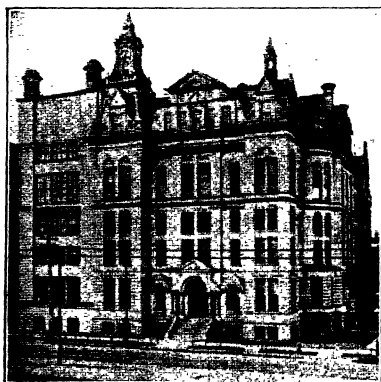
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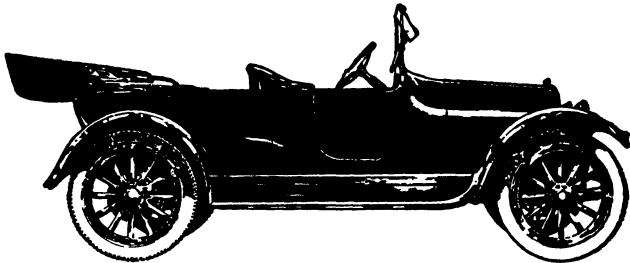
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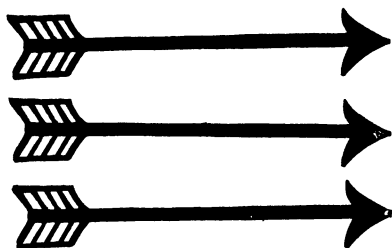
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